

The following pages list all papers published in the 2004 calendar year as reported to the NSLS by February 28, 2005. Citations are listed in order of beamline number and then alphabetically by the last name of the first author. This list contains reported citations for journal articles, published conference proceedings, books, chapters in books, formal reports, informal reports, technical reports, theses, dissertations, and patents. For citation submissions where research was performed on more than one beamline, the citation is listed under each beamline. However, each citation was only counted once.

The first column in the table (right) lists the number of publications reported to the NSLS during the 2004 fiscal year (Oct. 1, 2003 – Sept. 30, 2004) and published between 2001 and 2004. Although some of these publications were published earlier than FY 2004, they were not reported to the NSLS until this fiscal year. Thus, they have not been counted in prior years' activity reports.

The second column in the table lists the number of publications published in the 2004 calendar year and reported to the NSLS as of Feb. 28, 2005. These numbers are slightly lower than the fiscal year values because they contain only publications from 2004 and it often takes many months or years to account for user and staff publications.

Several types of journal articles are reported in this list, including premier journals, peer-reviewed journals, and a few that are not peer-reviewed. Premier journals include: Physical Review Letters, Science, Nature, Cell, EMBO Journal, Nature Structural Biology, Proceedings of the National Academy of Sciences, Structure, and Applied Physics Letters.

	Reported in Fiscal Year 2004*	Published in Calendar Year 2004**
Journals, peer-reviewed, premier	100	102
Journals, other peer-reviewed	506	487
Journals, non peer-reviewed	35	28
Total Journals and Magazines	641	617
Books/Chapters in Books	4	4
Published Conference Proceedings	40	40
Reports: Technical, Formal, Informal	3	3
Theses/Dissertations	15	15
Patents	0	0
Total Misc. Publications	62	62
Total Publications	734	679
NSLS VUV User Publications	71	57
NSLS X-Ray User Publications	549	537
NSLS Staff Publications	114	85
	734	679

* Publications reported to the NSLS from Oct 1, 2003 – Sept. 30, 2004 and published between 2001 – 2004.

** Publications published in 2004 as reported to the NSLS by Feb. 28, 2005.

NSLS Users

Beamline U1A

- H Hwu, B Fruhberger, J Chen. Different Modification Effects of Carbide and Graphitic Carbon on Ni Surfaces. *J. Catal.* **221** (1), 170-177 (2004).
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 S Xiao, S Brunner, M Wieland. Reactions of Surface Amines with Heterobifunctional Cross-Liners Bearing Both Succinimidyl Ester and Maleimide for Grafting Biomolecules. *J. Phys. Chem. B.* **108**, 16508-16517 (2004).
 M Zellner, J Chen. Synthesis, Characterization and Surface Reactivity of Tungsten Carbide (WC) PVD Films. *Surf. Sci.* **569**, 89-98 (2004).

Beamline U2A

- D Klug, J Tse, Z Liu, X Gonze, R Hemley. Anomalous Transformations in Ice VIII. *Phys. Rev. B.* **70**, 144113 (2004).
 J Kung, B Li, T Uchida, Y Wang, D Neuville, R Liebermann. In Situ Measurements of Sound Velocities and Densities Across the Orthopyroxene-High-Pressure Clinopyroxene Transition in MgSiO₃ at High Pressure. *Phys. Earth Planet. Interiors.* **147**, 27-44 (2004).
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Beamline U2B

- E Chouparova, A Lanzirotti, H Feng, K Jones, N Marinkovic, C Whitson, P Philp. Characterization of Petroleum Deposits Formed in a Producing Well by Synchrotron Radiation-Based Microanalyses. *Energ. Fuel.* **18** (4), 1199-1212 (2004).
- S Lappi, S Franzen. Eigenvector Mapping: A Method for Discerning Solvent Effects on Vibrational Spectra. *Spectrochim. Acta A.* **60**, 357-370 (2004).
- D Wetzel, J Striova, D Huggins, M Collinson. Synchrotron Infrared Microspectroscopy Reveals Localized Heterogeneities in an Organically Modified Silicate Film. *Vib. Spectrosc.* **35** (1-2), 153-158 (2004).
- P Yu, J McKinnon, C Christensen, D Christensen. Applications of Synchrotron Technology (SR_FTIR) to Feed Analysis and Utilization: A Novel Approach. *Proceeding of the 25th Western Nutrition Conference - Nutrient Requirement and Ingredient Evaluation in 21st Century*, Vol Sept 28-30, p. 98-112, sponsored by University of Saskatchewan. (2004).
- P Yu, J McKinnon, C Christensen, D Christensen. Using Synchrotron Transmission FTIR Microspectroscopy as a Rapid, Direct and Nondestructive Analytical Technique to Reveal Molecular Microstructural-Chemical Features within Tissue in Grain Barley. *J. Agr. Food Chem.* **52**, 1484-1494 (2004).
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- P Yu. Application of Advanced Synchrotron-Based Fourier Transform Infrared Microspectroscopy (SR-FTI) to Animal Nutrition and Feed Sciences: A Novel Approach. *Brit. J. Nutr.* **92**, 869-885 (2004).
- P Yu, J McKinnon, C Christensen, D Christensen, N Marinkovic. Chemical Imaging of Microstructures of Plant Tissues within Cellular Dimension using Synchrotron Infrared Microspectroscopy. *J. Agr. Food Chem.* **51**, 6062-6067 (2004).

Beamline U4A

- A Chan, W Chen, H Wang, J Rowe, T Madey. Methanol Reactions Over Oxygen-Modified Re Surfaces: Infleunce of Surface Structure and Oxidation. *J. Phys. Chem. B.* **108**, 14643-14651 (2004).
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Beamline U4B

- J Holroyd, Y Idzerda, S Stadler. Properties of thin film europium oxide by x-ray magnetic circular dichroism. *J. Appl. Phys.* **95** (11), 6571 (2004).
- A Lussier, J Dvorak, Y Idzerda, S Ogale, S Shinde, T Venkatesan. Comparative X-ray Absorption Spectroscopy Study of Co-Doped SnO₂ and TiO₂. *J. Appl. Phys.* **95** (11), 7190-7191 (2004).
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Beamline U4IR

- L Keller, S Messenger, G Flynn, S Clemett, S Wirick, C Jacobsen. The Nature of Molecular Cloud Material in Interplanetary Dust. *Geochim. Cosmochim. Acta.* **68** (11), 2577-2589 (2004).

Beamline U5UA

- H Jeong, R Skomski, C Waldried, T Komesu, P Dowben, E Vescovo. The Effective Spin Dependent Debye Temperature of Gd(0001). *Phys. Lett. A.* **324**, 242 (2004).

Beamline U7A

- L Andruzzoli, A Hexemer, X Li, C Ober, E Kramer, G Galli, E Chiellini, D Fischer. Control of Surface Properties Using Fluorinated Polymer Brushes Produced by Surface-Initiated Controlled Radical Polymerization. *Langmuir.* **20**, 10498-10506 (2004).

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Beamline U7B

- M Fernandez-Garcia, A Martinez-Arias, J Hanson, J Rodriguez. Nanostructured Oxides in Chemistry: Characterization and Properties. *Chem. Rev.* **104** (9), 4063-4104 (2004).

Beamline U8B

- T Owens, B Ludwig, K Schneider, D Fosnacht, B Orr, M Banaszak Holl. Oxidation of Alkylsilane-Based Monolayers on Gold. *Langmuir*. **20** (22), 9636-9645 (2004).
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Beamline U9B

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Beamline U10A

- C Homes, S Dordevic, M Strongin, D Bonn, R Liang, W Hardy, S Komiya, Y Ando, G Yu, et al.. A Universal Scaling Relation in High-Temperature Superconductors. *Nature*. **430**, 539-541 (2004).
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- D Chidambaram, G Halada, C Clayton. Synchrotron Radiation Based Grazing Angle Infrared Spectroscopy of Chromate Conversion Coatings Formed on Aluminum Alloys. *J. Electrochim. Soc.* **151** (3), B160 (2004).
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- P Yu. Application of Advanced Synchrotron-Based Fourier Transform Infrared Microspectroscopy (SR-FTI) to Animal Nutrition and Feed Sciences: A Novel Approach. *Brit. J. Nutr.* **92**, 869-885 (2004).

Beamline U12A

- S Linic, H Piao, K Adib, M Bartea. Ethylene Epoxidation on Ag: Identification of the Crucial Surface Intermediate by Experimental and Theoretical Investigation of its Electronic Structure. *Angew. Chem. Int. Ed.* **43** (22), 2918-2921 (2004).
- D Mullins. Adsorption of CO and C₂H₄ on Rh-Loaded Thin-Film Praseodymium Oxide. *Surf. Sci.* **556** (2-3), 159-170 (2004).
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Beamline U12IR

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Beamline U13UB

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Beamline X1A1

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Beamline X1A2

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Beamline X1B

- P Abbamonte, G Blumberg, A Rusydi, A Gozar, P Evans, T Siegrist, L Venema, H Elsaki, E Isaacs, G Sawatzky. Crystallization of Charge Holes in The Spin Ladder of Sr₁₄Cu₂₄O₄₁. *Nature.* **431**, 1078 (2004).
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Beamline X3A2

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Beamline X3B1

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